

AMENDMENTS TO THE SPECIFICATION

Please amend the Specification of Record on page 6, starting at line 16 (the second full paragraph on page 6), as follows (underlining indicating additions, strikeouts indicating deletions):

--The use of variable band limits to calculate the spectral intensity representation is not restricted only to the signal in which the described spectral weighting function $W_T(f)$ is also used, but may also be applied to the other respective signal and even to both signals (see Fig. 2a and 2b).

In order to improve the reliability of the calculated quality characteristic values, first of all, deformations of the mean spectral envelopes are largely corrected with a weighting function $W_T(f)$ prior to comparing the spectral properties. Secondly, the fixed band limits for integration of the spectral power density are removed and, instead, within a given optimization range, band limits are sought at which the resulting spectral intensity representations of the speech signal to be assessed and the reference speech signal exhibit maximum similarity.

In some embodiments, prior to calculating the quality characteristic values, there is an integration of the signal intensity for each evaluated short time segment in frequency groups, the limits of the frequency groups being variable on the frequency axis, but the width of the frequency groups remaining constant on the pitch scale. The specific loudness is calculated from the signal intensities in the frequency groups, the limits of those frequency groups being used in which the calculated differences in the specific loudness between the signal to be assessed and the reference speech signal exhibit the smallest difference in the band and time segment under consideration.

In further embodiments, the quality characteristic value is calculated from the similarity of the spectral representations in each time segment under consideration. The similarity representing a correlation coefficient, is averaged over all time segments under consideration, between the spectral representation of the speech signal to be assessed and the spectral representation of the reference speech signal in the respective time segment. In further embodiments, the weighting function $W_T(f)$ is calculated only from partial regions of the calculated mean spectral envelopes of the speech signal to be assessed and the reference speech signal. Consequently, the differences in mean spectral envelopes between both signals are reduced only in partial spectral regions. In further embodiments, the correlation coefficient between the spectral representation of the speech signal to be assessed and the spectral representation of the reference speech signal in the respective time segment is calculated from only a partial region of the spectral representation. That is, not all calculated spectral values are taken into consideration for the calculation of the quality characteristic value.--